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Rediscovery of the Madagascar Serpent-eagle *Eutriorchis astur*

by B. C. Sheldon & J. W. Duckworth

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The Madagascar Serpent-eagle *Eutriorchis astur* is known only from the rainforests of eastern Madagascar, where it is considered a highly endangered species. Ferguson-Lees *et al.* (in press) give a total of 11 museum specimens, from 7 specific sites in 4 main areas (of which 5 sites in 3 areas still exist: Langrand 1989). These range from Maroantsetra, at 15°S in the Baie d'Antongil, south to the type locality, Ampasimanava, at 19°24'S, a distance of 440 km. All the specimens were collected between "about 1874" and 1930; apart from 4–5 reports by a forestry official of a bird answering the species' description in the Marojeje Reserve north-west of Andapa (north of Maroantsetra) during 1964–77 (see Collar & Stuart 1985), there had been no conclusive evidence of the species' survival for over 50 years and, on CITES criteria, it could have been considered extinct.

With the realization that more rainforest survives in Madagascar than was believed 10 years ago (N. J. Collar), interest in rediscovering this species has been intense. However, its rediscovery has been complicated by the very few, and brief, published descriptions of the species, and its similarity to Henst's Goshawk *Accipiter henstii*. On this latter point, Collar & Stuart (1985) noted one specimen that had originally been labelled *A. henstii*, and one of the 2 recently discovered specimens in

the Museum of Comparative Zoology, Harvard (MCZ), was also first identified as *A. henstii* (N. J. Collar).

From August to October 1988, 7 observers surveyed the Marojejy Reserve for birds and mammals. Henst's Goshawk was found to be widespread and regularly seen (1–2 recorded on 22 days at 4 different sites: Safford & Duckworth 1990). Then, on 23 September, at Antsahaberoaka (14°21'S, 49°38'E), an area of typical mid-altitude rainforest at 850–900 m, much further into the reserve than villagers normally penetrate, B.C.S. noticed a large raptor perched below the canopy, and spent about 20 minutes compiling a description before fetching J.W.D. for a further 5 minutes viewing. Several Madagascar Crested Drongos *Dicrurus forficatus* then began mobbing the bird and it flew across a river. Despite much searching, it was not seen again.

Field observations

The following description is a distillation of our independent notes, taken as the bird was watched at ranges of 10–20 m, in good light, at a variety of angles from below, usually largely unobscured, with 10× binoculars. The descriptions agreed with each other in all features except in the subjective assessment of leg length. Interestingly the probable serpent-eagles reported by the forestry official in Marojejy were described as "relatively fearless" (Collar & Stuart 1985), which could certainly be applied to the bird that we saw.

Structure

A rather large raptor of medium build, probably similar in body size to the Madagascar Buzzard *Buteo brachypterus*, but this was difficult to judge. Head well proportioned, not 'fierce'-looking and very reminiscent of the Crested Serpent-eagle *Spilornis cheela* (with which J.W.D. was already familiar). Weakly developed supra-orbital ridge (weaker than on *B. brachypterus*). Cheeks 'puffy'-looking, being when face-on the broadest part of the head. Loose, 'hairy'-looking feathering around the bill. Rear crown and nape feathers about twice the length of those adjacent, giving an elongated appearance to the head, rather than a crest.

Bill structure striking. Upper mandible large, bulging and heavily curved. Cutting edge straight and without irregularities until dropping sharply to hook at tip. No obvious cere, but possibly some greyish skin between the bill and lores.

Wings short and rounded, barely extending on to the tail at rest, the tips not meeting. Tail long, much longer than on *B. brachypterus*, seemingly square-ended.

Legs robust and rather long (J.W.D.) or of medium length (B.C.S.) with prominent claws; feathering extended to the tibio-tarsal joint. Exposed tarsi showed an unusual knobbly or rough appearance.

Plumage

Upperparts mostly dirty grey-brown; carpal feathering conspicuously paler. Nape to rear crown barred blackish-brown, including the elongated feathers. Similar bars over eyes and on ear-coverts. Some nape and rear

crown feathers tipped whitish, without forming either bars or a white occipital patch. Remiges heavily barred on uppersides; 6–7 exposed dark bars on primaries. Greater coverts more narrowly barred. Tail of similar colour to upperparts with 6 well demarcated, evenly spaced broad dark bars, one masked by the wingtips; no light or dark terminal bar; each dark tail-bar narrowly bordered paler. Underparts whitish, thickly barred dark from throat to undertail-coverts, these bars being half to one third of the width of the tail-bars, rather thinner on the undertail-coverts.

Bare parts

Legs dirty yellow, toes possibly brighter. Iris bright yellow. Bill dark greyish-horn.

Behaviour

The bird mainly perched on large branches below the canopy, slowly scanning the ground below. It changed perch every 1–2 minutes, although seemingly oblivious to our presence, moving less than 20 m every time, with easy, fluid flight.

Discussion

At the time neither of us had seen a specimen of *E. astur* so we were unbiased in composing descriptions. Because the bird offered such prolonged, unobscured, close views, B.C.S. in particular was able to recheck each point.

Immature *A. henstii* (like the Northern Goshawk *A. gentilis*) has streaked underparts, rather than the even transverse barring of adult *A. henstii* and *Eutriorchis*. We have studied the *E. astur* type (and only) specimen and the 6 (3 adult, 3 immature) skins of *A. henstii* in the British Museum of Natural History (BMNH), and seen photographs of the 2 specimens in MCZ, and believe that adult *A. henstii* can be ruled out on these points (roughly in order of importance):

1. Lack of irregularities on the upper mandible cutting edge. *A. henstii* has a very prominent 'tooth' here.

2. Dark upperwing, covert and nape-barring; this is absent from *A. henstii*.

3. The elongated crown-feathers, giving a long-headed appearance, which immediately reminded J.W.D. of *S. cheela*. This did not, in fact, resemble the hooded appearance depicted in Sharpe (1875), though in the text Sharpe stresses the similarity between *Eutriorchis* and *Spilornis* in "fullness and form of crest". *A. henstii* has no such elongation.

4. Lack of a prominent supra-orbital ridge, giving a facial character totally dissimilar to that of an *Accipiter*.

5. Pale carpal feathering. This is prominent on the BMNH *E. astur* specimen, but not shown by any of the *A. henstii* specimens.

6. Dark bars on the tail. *A. henstii* tends to have poorly demarcated, broadly U-shaped tail-bars, while the *E. astur* specimen has them parallel-sided, giving more regular bands across the tail. Only one Henst's Goshawk showed any traces of pale margins to these bars which are comparatively prominent on *E. astur*.

7. Tarsal scutellation. *E. astur* has large scales giving a rough appearance to the tarsi; *A. henstii* has much smaller scales giving a smooth appearance.

8. Feather structure around bill. *A. henstii* has limited bristle-like feathering around the bill; it is much more extensive on *E. astur*.

9. Barring on the underparts. This is fine on *A. henstii* but broader on the *E. astur* type. The Marojejy bird closely resembled the type in this respect.

10. The Marojejy bird either lacked or had a very inconspicuous cere; *A. henstii* has a very prominent cere.

The bird seen at Marojejy agreed with the *E. astur* type in all these 10 features separating the 2 species. Many of these differences are absolute, including such gross plumage features as heavily barred upperparts.

A draft of this paper was sent to I. J. Ferguson-Lees, who discussed it over the skins at BMNH with Carl Edelstam and K. H. E. Franklin. Edelstam is in the probably unique position of having examined in detail all the known 11 museum specimens of *Eutriorchis*, and Franklin has painted the plate of this species in Ferguson-Lees *et al.* (in press). All 3 found the combination of the main identification points convincing: "especially the form of the feathering around the bill and the hidden cere, the head shape, the colour and barring of the upperparts, the whitish tips to the rear crown and nape, the rough tarsi, and the lack of any 'tooth' on the upper mandible." They pointed out that "The prominence of the dark barring on the upperparts, taken with the whitish tips to the rear crown and nape but not the wing-coverts indicates a juvenile in somewhat worn plumage, perhaps 8–10 months old if we assume a hatching date of November–January to coincide with the peak breeding season of most Madagascar rainforest birds. The dark banding is more obscure in immature and, particularly, adult plumages. There are very small whitish tips to the rear crown and nape in fresh second plumage, but we think these would hardly be visible under the forest canopy. It should be noted that the type specimen at Tring is an immature largely moulted into second plumage." N. J. Collar, A. Gretton, J. H. Fanshawe and N. K. Krabbe also compared our descriptions with the same specimens that we examined, and independently concluded that they refer without question to *Eutriorchis astur*.

This bird was only 500 m from a camp that was occupied for 18 days, yet despite much observer effort it was seen only once. The lack of further sightings may be indicative of the species' elusiveness, due perhaps to its sub-canopy habits.

This represents the first confirmation of the continuing existence of the Madagascar Serpent-eagle *Eutriorchis astur* since 1930.

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Size-variation and post-breeding movement in the Didric Cuckoo *Chrysococcyx caprius* (Boddaert)

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In the southern Afrotropics the small glossy Didric or Diederik Cuckoo *Chrysococcyx caprius* (Boddaert), 1783: Cape of Good Hope, Cape, is a widespread breeding resident from about early October to mid-April, and is an established brood parasite of a range of medium-sized and mainly granivorous passerines. The austral populations spend the non-breeding season in the continental tropics, where their disposition remains inadequately known. Interestingly, of some 250 birds ringed in southern Africa with SAOS bands, only 2 have been recovered, both from within 10 km of the ringing site (T. B. Oatley).

As ringing has thrown no light on the species' post-breeding movements, I have analysed wing-length data as an alternative means of shedding light on the limits of the migration. Southern birds were shown by Hartert (1921) to be longer-winged than the ostensibly more sedentary populations of forested Upper Guinea. Hartert postulated that male Didric Cuckoos from South Africa were large, with wings 118-121, females 124 and 125, *versus* 108-115 in males and 110-117 mm in females from West Africa. The issue was subsequently studied by W. L. Sclater (1922), Gyldenstolpe (1924), Friedmann (1930), Bannerman (1922, 1933), and others; but owing to the extensive overlap in wing-length measurements found in most museum samples, Hartert's recognition of a